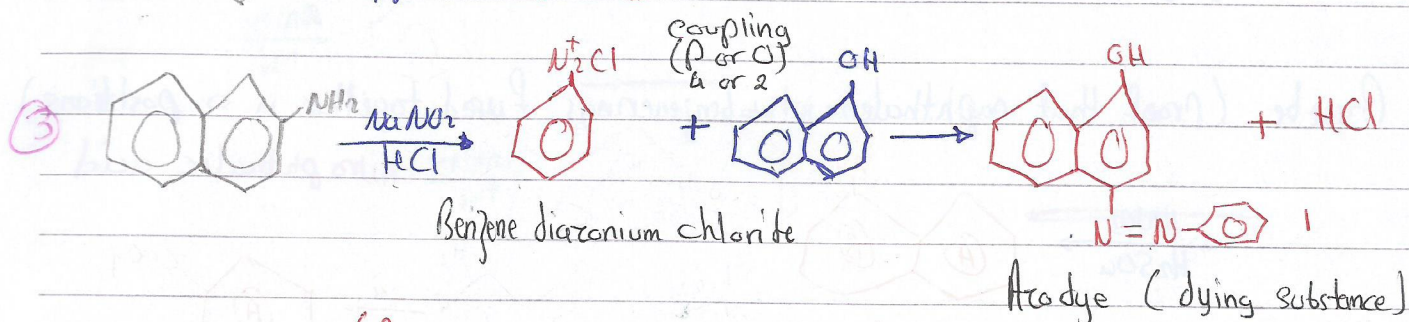
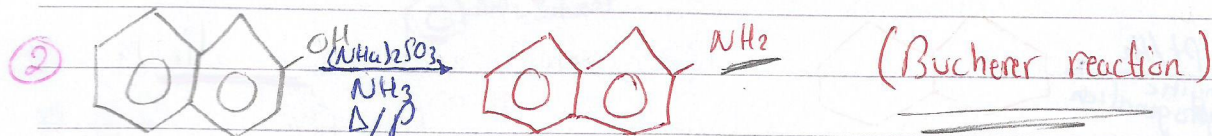
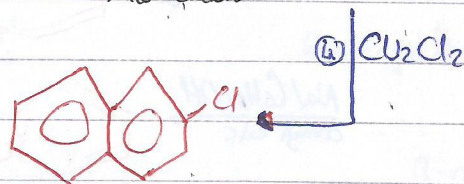
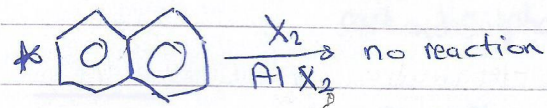
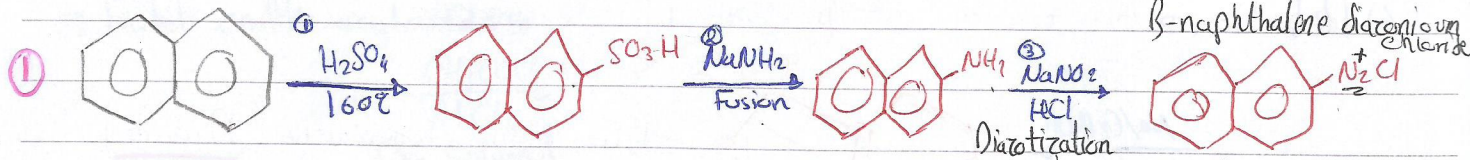
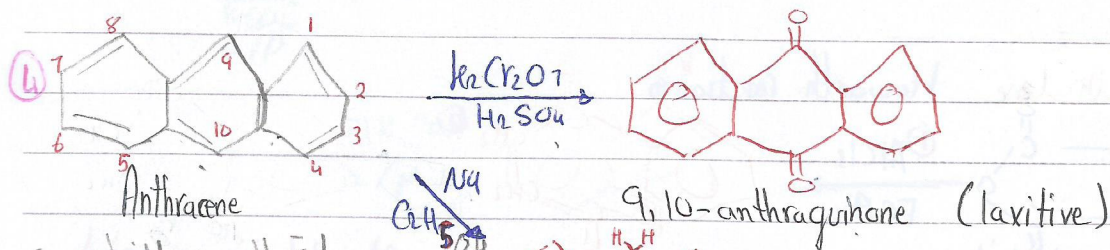
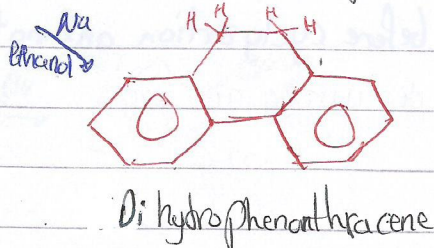
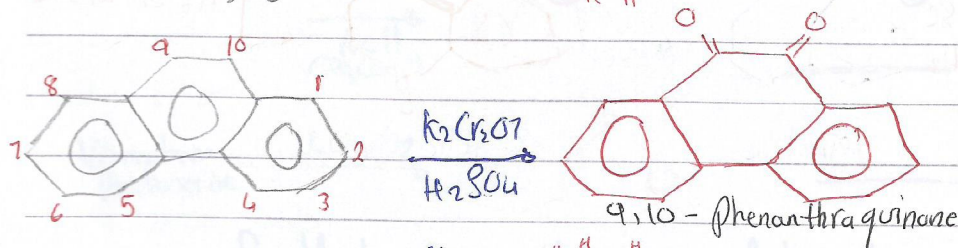
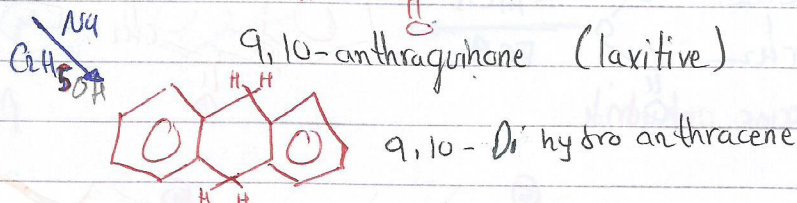




(Diazodyezonium coupling reaction)

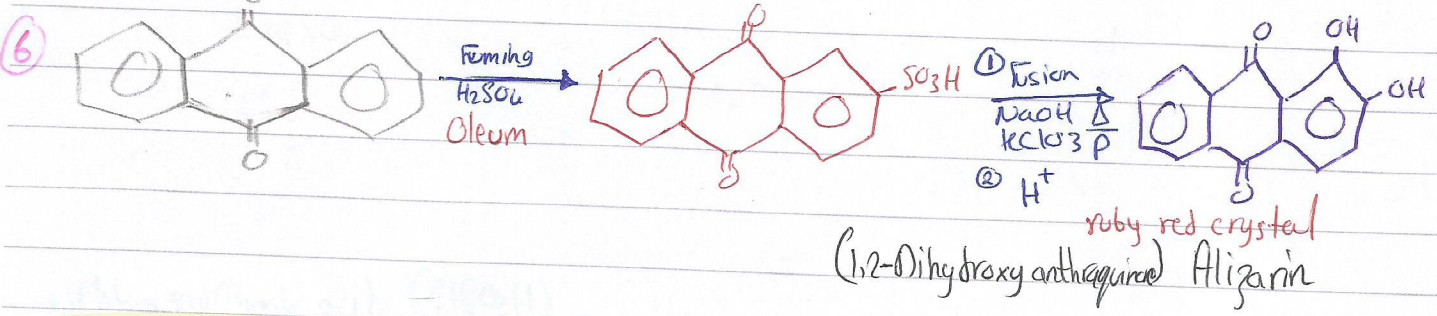
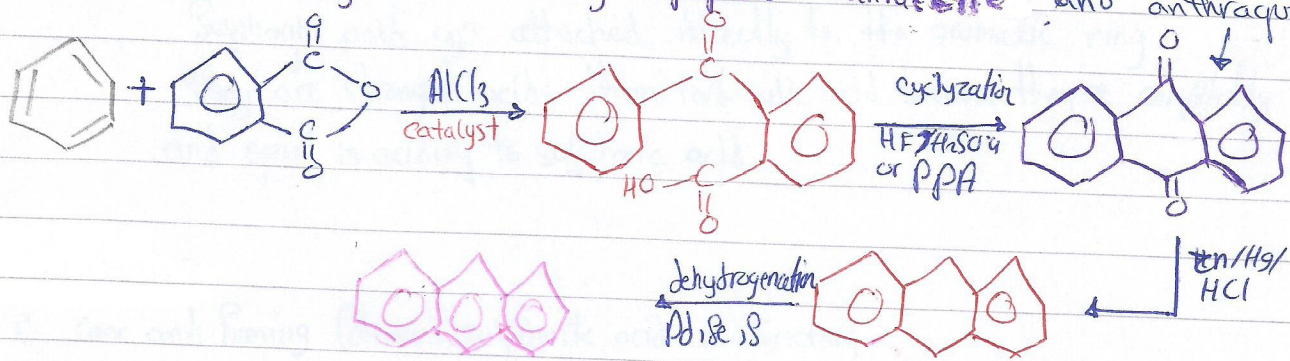


Arqam al-bay' al-khawass
al-9,10

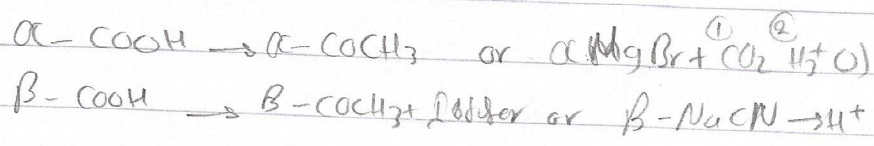
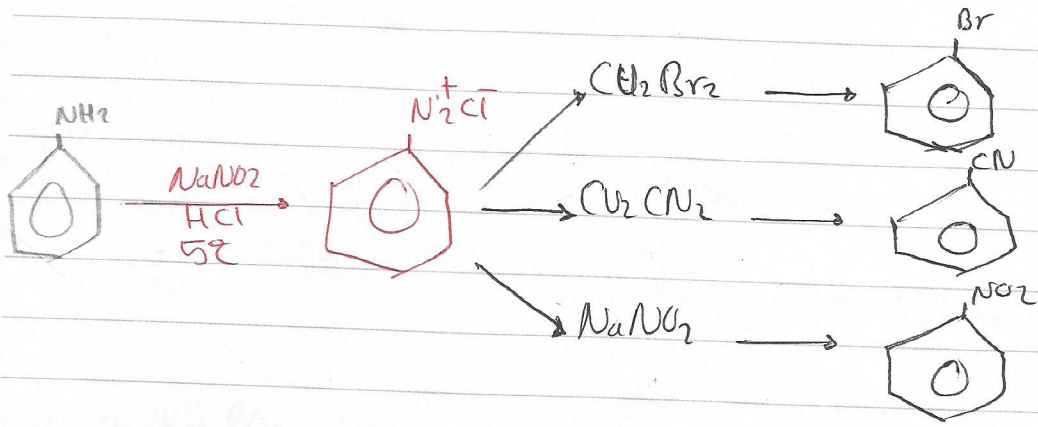


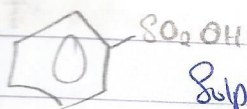
(17)

5 Starting with benzene how can you prepare anthracene and anthraquinone



Sandmeyer Reaction



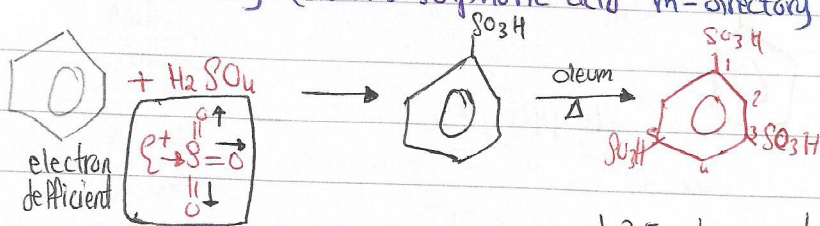


Aromatic sulfonic acids

Sulfonic acid gp attached directly to the aromatic ring
 They are stronger acids than carboxylic acid because they're completely ionized and equal in acidity to sulfuric acid

Synthesis

1) conc and fuming (oleum) sulphuric acid m-directory

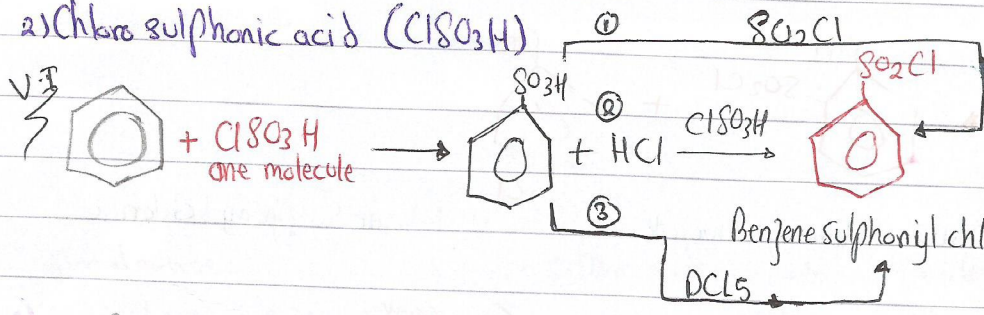


1,3,5-benzene trisulphonic acid

Electronigativity

FL	0.35
N 3	0.3
C 2.5	1.2

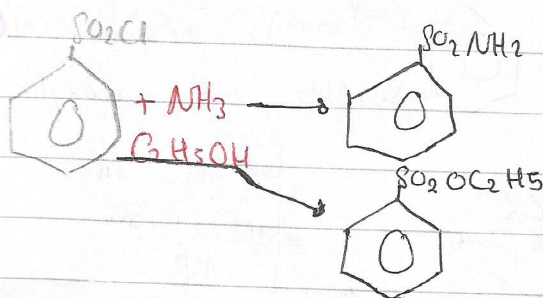
2) Chloro sulphonic acid (ClSO_3H)



* is an important reagent for determining 1,2,3°

amines

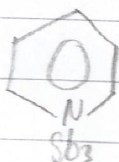
+ POCl_3



Benzene sulfonamide

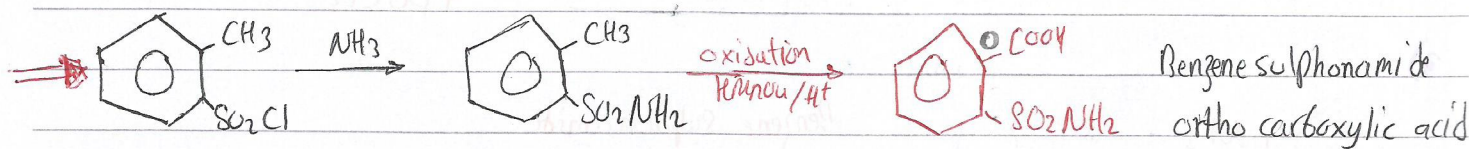
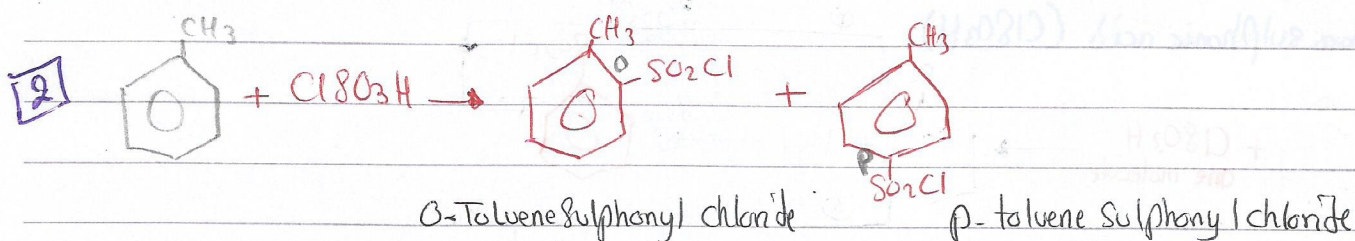
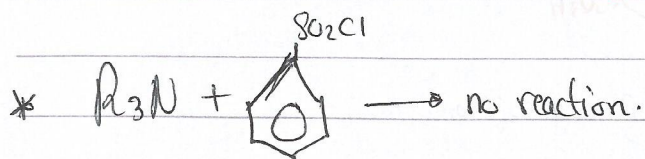
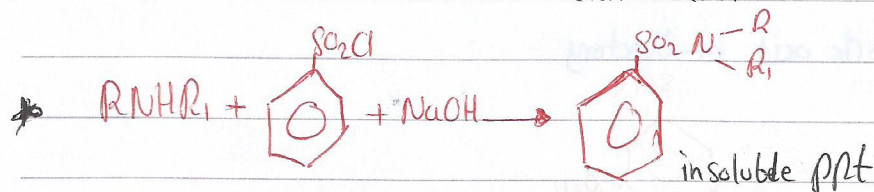
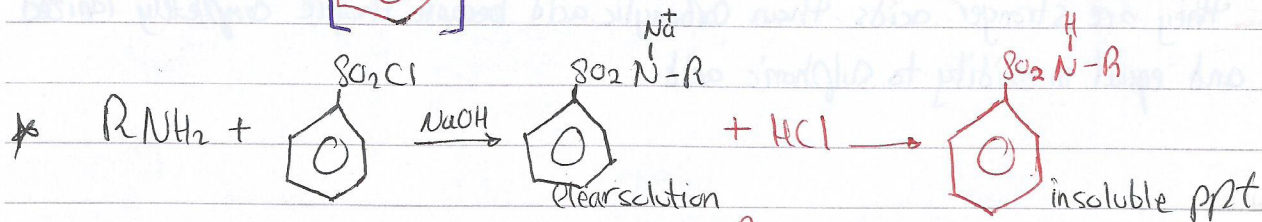
Benzene ethyl sulfonate (ester)

4) Pyridine SO_3

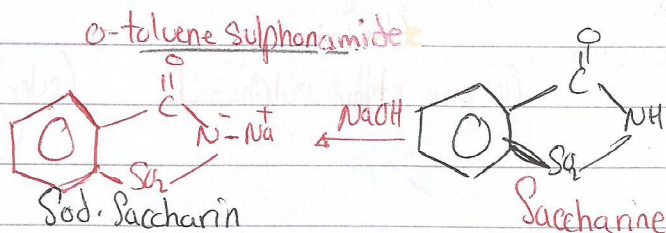


mild sulphonating agent

VI Hisberg test for Determination of 1° (RNH₂), 2° (RNHR₁), 3° (R₃N) amines using S(=O)(=O)Cl (20)

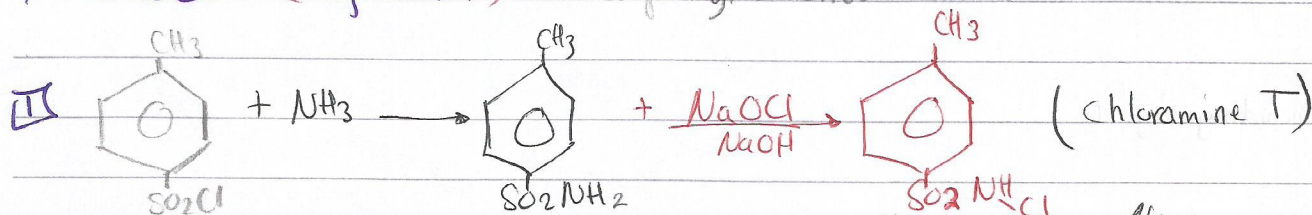


sweetening agent
500 times as
sane sugar



cyclization
HF $\rightarrow$ H2SO4
PPA

* S(=O)(=O)Cl (very useful) Sulphonyl chloride



used for disinfection of H₂O

Kills bacteria $\rightarrow$ Nascent O₂ very active

